

Board Members Attending: Nicole Bartlett, Janet Freedman, Jason Goldstein, Dave Hebert, Rhonda Moniz, Todd Morrison, Andy Pershing, Tom Pham, Joe Salisbury, Tom Taylor, John Trowbridge, Philip Trowbridge, Dave Ullman, Chris Williams, and Carl Wilson

Other Attendees: Rob Cardeiro, Carl Gouldman, Jake Kritzer, Julianna Mullen, Jackie Motyka, Tom Shyka, Emily Silva, and Oriana Villar

John Trowbridge, Carl Gouldman, and Jake Kritzer opened the meeting by welcoming everyone and commenting on the changes and transitions NERACOOS and the Board have experienced over the last year, including a new Executive Director, President, and Vice President, COVID – 19, the upcoming Integrated Ocean Observing System (IOOS) Five-Year Proposal, and the importance of diversity, equity, and inclusion within the board and staff.

Approval of the Minutes

No edits or changes were proposed for the June 10, 2020 board meeting minutes. Todd Morrison motioned to approve the minutes from the June board meeting, seconded by Chris Williams. The board meeting minutes were unanimously approved.

Executive Committee Update

The Executive Committee update was provided by John Trowbridge. The Executive Committee met recently and discussed a set of goals to propose to the board to consider for the upcoming fiscal year. These goals are to review and support the five-year proposal, search for funding opportunities, support the Executive Director, and increase the diversity of the board. There is a scheduled board session to discuss these goals later in this meeting.

Nominating Committee Update

The Nominating Committee update was provided by Emily Silva. Currently the members of the Nominating Committee are John Trowbridge, Jason Goldstein, and Regina Lyons. John will be stepping down as he is President of the board and chair of the Executive Committee. Any volunteers interested in joining Jason and Regina, please email Emily. The roles of the Nominating Committee include providing updates during board meetings, participating in a call or email conversation prior to each meeting, and reaching out to potential nominees to the board to gauge interest in joining before the vote at the final meeting of the year.

As of this meeting, the slate of nominations includes; Dave Ullman, first term ending, Nicole Bartlett, completed James Brinkley's term and eligible for her own, Joe Salisbury, second term ending, ineligible for another, Janet Freedman, officer term ending, and Mike Whitney, officer term ending (each have one more year as a director). There are seven vacant seats on the board at this time. Please let the Nominating Committee know of any suggestions for potential nominees.

Nominations are due to the secretary of the board on October 5, 2020, the slate is due to the full board by November 4, 2020, and the votes will take place during the final board meeting of the year on November 19, 2020.

Nicole Bartlett is the regional coordinator for NOAA North Atlantic Regional Team (NART) and represents the region from Maine to Virginia. The Northeast NOAA Office of Coast Survey regional navigation manager is Colleen Roche and may also be a good fit for the Board of Directors. Nicole is happy to accept the nomination and serve on the board, but Colleen is another option and should be considered as well.

Finance Committee Update

The Finance Committee update was provided by Janet Freedman. The July 2020 financial report was distributed to the board prior to this meeting. Janet provided a walkthrough of the budget through July, revenue, subawards, personnel, and other. As of July, invoicing for subawards was behind but caught up as of August. Please email Rob Cardeiro with any questions on the finance report.

Carl Gouldman reminded the NERACOOS staff and board that a one-year no-cost extension is typically available for the five-year award. There may also be opportunities for a longer extension request due to COVID-19. NERACOOS has been checking in with partners to gauge the effects of COVID-19 to field work and other project deliverables. There have been some delays but nothing very significant as of now. The NERACOOS staff will keep in touch with the IOOS Program Office (PO) on whether the additional time will have to be requested within the original no-cost extension or if 12 months is requested and then additional time is requested at the end of the 12 months.

Board Session

The Executive Committee proposed to include an open board session in all board meetings moving forward to discuss pertinent issues and goals. As mentioned in the Executive Committee update, proposed goals for the board for the upcoming fiscal year include:

- Support the upcoming five-year proposal
- Search for new funding opportunities
 - This goal is linked with supporting the five-year proposal as a number of the mini proposals submitted would support new projects and research.
- Support the executive director and staff
 - This will be critical in the upcoming year given the challenges of the pandemic and leadership transition both on the staff and the board of directors.
- Increase the diversity of the board.
 - The Executive committee would like to extend this beyond the board to include funding, education, and outreach opportunities in the NERACOOS region.
 - Could also look to expand the diversity of the board to a younger group, academics, doctoral candidates, and others.
 - Reach out to universities and community colleges for internship opportunities.
 - Shellfish/fishing industry representation.
 - Emily will send out the list of board of directors and their affiliations for reference when considering new members.
 - Tribal representation on the board and within projects.
 - The EPA has connections with local tribal communities and can share resources and facilitate conversations.

Additional goals may also include:

- Branding/labeling NERACOOS as essential workers. The data provided and the continual operation of assets is critical to many users.
- Help expand the user base and increase visibility and applicability of NERACOOS data in the region.
 - Julianna has been working on a branding packet which would assist in communicating the value of NERACOOS data and helping to raise awareness.

- This packet would include guidance on NERACOOS attribution in papers, projects, websites, and presentations.
- Once available, this packet will be accessible on the website as well.
- Rhonda Moniz is on the editorial board of Ocean News and Technology magazine and on a podcast called Sea State and Jake would be a good person to interview for an upcoming episode, and Rhonda could assist in submitting NERACOOS updates or articles to the magazine.
- NERACOOS could also take advantage of the various networks and newsletters of the various board members organizations.
- Social media is another outlet to quickly and easily share news.
- Guest webinar series, highlight partners or PIs for lectures on projects and various other topics.
- Student scholar program, or interns, to analyze NERACOOS data and demonstrate various ways to use the data.

NERACOOS Operations Update

The NERACOOS staff provided the operations update. Senator Shaheen entered a tribute to Ru Morrison's work into the congressional statement on July 29, 2020. NERACOOS staff worked with Senator Shaheen's staff to write this statement. The statement was also shared through NERACOOS social media.

The NERACOOS staff is still primarily working remotely. The full return to the office is to be determined and the lease for the space will be continued for another year. Staff has been discussing IT and equipment needs to continue working remotely and support staff and projects. Staff are working with PIs to document impacts to project efforts.

Jackie shared the system operators map which highlights NERACOOS partners and their work. Some of the projects shown are part of the Closing the Gaps Campaign and within this final year of funding for the IOOS Fiscal Year 16 five-year award, a number of these projects received additional funding for new and sustained operations. This additional funding supported two new High Frequency Radar (HFR) stations operated by Woods Hole Oceanographic Institution (WHOI), recapitalization of the Great Bay Buoy operated by University of New Hampshire (UNH), Finite Volume Community Ocean Model (FVCOM) modeling for Long Island Sound (co-funded with the Mid-Atlantic Regional Association Coastal Ocean Observing System, MARACOOS), Northeast Coastal Ocean Forecast System (NECOFS) hard disk replacement for the University of Massachusetts Dartmouth (UMassD), and upgrades to the Hampton tide gauge station.

COVID impacts have been minor, with some delays including availability in ship time. NERACOOS operators and staff will continue to document COVID impacts.

The Cape Cod Physical Oceanographic Real Time System (PORTS) includes a wave buoy in Cape Cod Bay and an Acoustic Doppler Current Profiler (ADCP). Tom Pham is leading an effort as part of this project with Massachusetts Maritime Academy (MMA) to make the ADCP data available through an Automatic Identification System (AIS), so ships can receive the current data. NERACOOS, Woods Hole Group (WHG), and NOAA Center for Operational Oceanographic Products and Services (CO-OPS) are working together on adding another wave buoy in Buzzards Bay and will be soliciting feedback from key stakeholders in the area to refine the location of the new buoy.

Mayflower Wind has deployed a long-term buoy in their lease area south of Nantucket. The data from this buoy will be shared through NERACOOS. Mayflower has agreed to provide wind data which is critical for mariners. NERACOOS has also been collaborating with MARACOOS and Orsted to establish a data sharing program. Orsted has deployed two buoys in the MARACOOS region and may also be developing windfarms in the NERACOOS region.

The NERACOOS Coastal Ocean Modeling Testbed (COMT) project is funded by the IOOS COMT program and focuses on coupling the weather and hydrodynamic model NECOFS operated by UMassD, and a hydrologic model operated by UNH and is aimed at improving forecasting where rivers meet coastal waters. This summer, UMassD has been updating their cluster, they have all hardware in place and are testing the software, so there will be major improvements to how the modeling system works. In July, the COMT partners put together a paper and presentation for a workshop that focused on coastal inundation research which involved stakeholders.

The Ocean Acidification (OA) Thresholds is a project funded by NOAA National Centers for Coastal Ocean Science (NCCOS) and NOAA Ocean Acidification Program (OAP) and, as with the COMT project, is led by Changsheng Chen and his team at UMassD so the modeling upgrades on the COMT project will also benefit this one. The goal of this project is to create a biogeochemical model for the northeast. To date, a 2017 hindcast has been created, and the team is hoping to move on to adding an additional year. COVID impacts include reduced access to the lab which affects how often the modeling team can meet in person. There is a stakeholder engagement component of this project, and that team has been discussing the best strategy to work with stakeholders moving forward and recently submitted a Letter of Intent (LOI) for additional OAP funding to expand the modeling effort.

The Integrated Sentinel Monitoring Network (ISMN), has been working on the first implementation of their Marine Biological Observation Network (MOBN) funded through the IOOS PO and the Bureau of Ocean Energy Management (BOEM). There is physical and biological monitoring at two stations in the Gulf of Maine, one in Wilkinson Basin and the other along coastal Maine time series stations. As of last month, these stations were able to collect the first full suite of observations, there were some delays due to COVID, but they are catching up now and will progress on a monthly basis. The next step is integrating the data into the NERACOOS system.

Julianna is creating a six-month communication strategy for NERACOOS, building a content library from existing material and identifying what content will need to be added. From there, a larger strategy for the organization will be put together. NERACOOS has been getting more involved in social media, primarily with Facebook but also working on increasing exposure through Instagram and Twitter and would like to share more updates from Principle Investigators (PI) on their projects. Julianna has been working on a fact sheet for the OA Alliance, creating a visual representation of the effects of OA on commercially important species and habitats. The Visualizing Ocean and Coastal Acidification Locally (VOCAL) project is ongoing, Julianna has been discussing changes with working groups to get these finalized. Julianna is working with the ISMN Oversight Committee (OC) to create a general one pager as well as a new website, in addition to the new logo and branding packet. With these communication materials, the ISMN OC will be able to spread awareness for this project and share information.

The ISMN has identified various indicator species in the region on which to focus some of their initial projects such as the ISMN MBON project described above. Right now, ISMN is working closely with the Northeast Ocean Data Portal to display monitoring efforts in the region and continuing to expand outreach and collaborations with the addition of representatives from the Northeast Fisheries Science Center and NOAA NCCOS on the ISMN OC.

The Northeast Coastal Acidification Network (NECAN) is currently organizing its next webinar series which will focus on doctoral candidates working on projects with a focus on OA. Following Shell Day 2019, two papers will be published, one on the citizen science and community engagement of Shell Day and the other on the data analysis. NECAN has just received funding to support a working group which will review and analyze available information on the impacts of OA to key species and ecosystems in the region and assist in the creation of an infographic displaying this information. NECAN has also begun discussions on the pro and cons of establishing a social media presence.

The Ocean Acidification Information Exchange (OAIE) has more than 1,100 members as of July 2020. Julianna gauges impact and success of the site by looking at how often members are interacting with the website; how many times people log in, make comments, post events, and participate in conversations. Julianna and the OAIE Steering Committee are continuing to work to improve the site and members experience, encouraging everyone to participate and feel comfortable asking questions and interacting with other members.

NERACOOS is working with WHOI on a Monitoring and Event Response for Harmful Algal Blooms (MERHAB) project, work is progressing, and fieldwork will be occurring throughout the year. NERACOOS is also working with the Animal Tracking Network (ATN) and the IOOS PO to fund two animal tracking projects, one with Maine Department of Marine Resources (DMR) to track white sharks in the region, and the other is with the Pacific Islands Ocean Observing System (PacIOOS) using telemetry in Hawaii.

The Mariner's Dashboard has been undergoing a major update both on the front-end display as well as the back-end operations and how data is ingested into the NERACOOS system. This product will display real-time data from NERACOOS supported assets as well as other assets in the region such as wave height, water temperature, and windspeed.

Jackie has reviewed a number of proposals submitted recently by NERACOOS. Overall NERACOOS staff has been focusing primarily on the NOAA IOOS five-year award renewal and will continue to do so over the coming months. For a full list of recently submitted and upcoming proposals, please contact one of the NERACOOS staff.

Diversity, Equity, and Inclusion Update

The DEI Update was provided by Julianna Mullen. Julianna has reached out to a number of DEI training organizations and has heard back from one thus far. NERACOOS staff would like to participate in a workshop or training exercise and work on the development and implementation of an action plan. One of the organization has quoted \$17 - \$23K for the development and assistance in implementing an action plan. At this time, this is not in the NERACOOS budget, however NERACOOS would like to move forward with implementing some changes and possibly participating in a single workshop for now.

Additional Considerations:

- The formation of a DEI Committee on the Board of Directors.
- Participate in DEI training workshops through partner organizations.
 - GMRI is in the process of setting up and scheduling DEI training, it may be possible for NERACOOS staff to participate.
- Create a NERACOOS-wide plan for staff and move forward from there to implement changes into projects.
- Diversify staff, Board of Directors, Pls, etc.
- Consider not only monetary costs but time and effort that will go into the workshops and implementation of an action plan, how priorities will be set.
- Inventory of underrepresented or marginalized communities in which to initiate new projects and research.
- Include unconscious bias training within the DEI training as well.
- Internship opportunities for under-represented and indigenous communities, or low-income or first-generation college students.

The Nominating Committee, with the help of the NERACOOS staff, can begin to consider an action plan for diversity on the board and from there the board and staff can make a decision about the necessity of a DEI Committee. Other options for board membership could include members of DEI Committees from partner organizations, to assist NERACOOS in initiating these changes. This will be an on-going discussion with the staff and the board of directors.

IOOS Program Office Update

Oriana Villar provided the IOOS PO update. Three people have joined the IOOS PO team recently; Brian Zelenke is the Surface Currents Program Manager and will be the program and technical lead for the HFR network, Matt Biddle, Data Management Analyst, is focusing on the MBON portal, biological data and products and will serve as Data Management and Communication (DMAC) project support and National Centers for Environmental Information (NCEI) point of contact, and Dr. Tracy Fanara is the Coastal Modeling Portfolio Manager.

Jeff Runge, through the ISMN MBON project, helped to establish national MBON Biodiversity and Ecosystem Function Team, creating partnerships with the other Regional Associations (RA), other MBON projects, and Long-Term Ecological Research projects (LTER). This team have developed a global modeling workshop to identify the connections between plankton biodiversity and ecosystem services to be held virtually this fall. Through this project, the ISMN MBON is creating connections with the Atlantic Deepwater Ecosystem Observatory Network (ADEON) which is critical for integrating biodiversity data with acoustic research.

Oriana provided a brief update on the FY20 IOOS funds and status of the FY21 funding levels. In FY20 \$6.9M went to the national IOOS line, \$39M to the RAs, and \$6M was funneled through the IOOS PO to the RAs from other NOAA offices such as BOEM, NASA, and the Office of Naval Research (ONR). The FY21 budget has passed in the House and has moved on to the Senate.

In early August an IOOS Advisory Committee meeting was held virtually. The focus of the meeting included ongoing committee priorities, the role of ocean observations in forecasting, strategy and vision for the system, partnership for a successful system, and requirements to develop the next steps of recommendations to NOAA and the Intergovernmental Oceanographic Commission (IOC). Dr. Neal Jacobs, acting NOAA

Administrator, shared his vision for advancing NOAA's earth observation mission and how to better engage the private sector in these efforts. A key message of this meeting was the importance of ocean observations and public and private partnerships to improve NOAA's forecasting abilities.

The IOOS PO has also been discussing DEI and making changes are a high priority within the office and they will continue engaging with the RAs in these conversations.

IOOS Association Update

Jake Kritzer provided the update for the IOOS Association. There has been recent progress on appropriations for the federal budget, as Oriana stated, the budget has passed in the House at \$40.5M, up \$2.2M from last FY, the budget now goes on to the Senate. The Integrated Coastal and Ocean Observing System (ICOOS) Reauthorization Act has passed in the House with three amendments including a static funding level of \$47.5M in each of the next five fiscal years. The Senate passed the act allowing for incremental increases in the funding over the next five fiscal years from \$48M to \$56M.

A few months ago, Congress requested project proposals and funding estimates to include in a stimulus bill to build resilience into the observing system and replace aging infrastructure, this is still in progress. An economic stimulus bill is also in the works, Josie had requested that RAs submit proposals for short-term, quickly initiated, projects addressing maritime transportation, weather, sea level rise, ecological health, fisheries, and coastal hazards.

The IOOS Association annual meeting is going to be held in October with a number of issues to be discussed including the IOOS Association strategic plan, the economic valuation study, the IOOS OAR collaborative workshops, HAB observation networks, and looking ahead to the FY22 appropriations requests.

NERACOOS Mini Proposal Review and Discussion

The goal of the mini proposals is to ensure NERACOOS has a durable, sustainable, and resilient organization, and that we meet the varied and evolving needs of our users. The goal of this discussion will be to review the various types of mini proposals which were submitted, the funding levels, and answer any questions on the process or proposals. The review of the proposals has begun by the staff and board members through a review template which will help direct the selection process to build a strong proposal for the next five years.

Through stakeholder interviews, surveys, website analytics, and the economic valuation study, it is clear that NERACOOS real-time buoy data are critical to users and stakeholders. Jake reviewed user needs in the region to keep in mind as well including maritime safety, coastal monitoring, right whale research and detection, and offshore wind observations.

A brief overview of the mini proposals shows the number of proposals received, the institutions or organizations who submitted, funding levels with breakdowns by year, and proposal categories (buoys, modeling, HFR, etc.) Jake reviewed a few of the categories for the board, things to consider, and how they can be prioritized. Prior to this meeting, Jake created and shared documents detailing these topics.

Select Mini Proposal Categories:

- Buoys

- Long term buoy data series are critical for understanding trends and forecasts. Sustained funding can be difficult to obtain, this is a priority.
- Gliders
 - It would be very beneficial for NERACOOS gliders to be part of the international glider group and be a part of that sustained observations network.
- Coastal Monitoring
 - This becomes more difficult closer to the coast in bays and estuaries.
- Acidification
- North Atlantic Right Whale research
- Coastal Flooding
 - Not originally its own category but may be beneficial to pull out the proposals pertaining to this for review and planning purposes.

Other Considerations for Proposal Process:

- Match categories and/or proposals with potential user groups as another way to analyze proposals. Prioritize projects with economic and societal value and sustainability.
 - Build this up from within NERACOOS, prioritize the user and make sure new projects clearly identify end-users.
 - In the future, and with funding resources, it may be a good idea to add an industry outreach staff member to the NERACOOS team. While all staff have aspects of outreach in their roles, it might be beneficial to have a dedicated position for this.
 - NERACOOS staff prepared for the release of the IOOS Notice of Funding Opportunity (NOFO) by identifying key stakeholders and user groups, this list could be used to help organize mini proposals and align the proposals with these groups and get a better understanding of how needs are being met.
- Put funds aside for website improvement and maintenance.
 - Data products on the website are relatively old and funding primarily goes to sustaining observation networks, however this is a priority and efforts are being made to make sure data is accessible to end users through newer tools, such as the Mariner's Dashboard.
- Connect proposals that have similar missions.
- NERACOOS does retain some flexibility in funding from year to year as the appropriation levels change and can shift priorities as projects advance and new information is received, as long as it works within the proposal submitted to IOOS.
- Could be an option to start projects later in the five-year timeframe as funding allows.
- When the main proposal is complete, it could help inform and define an updated NERACOOS strategic plan.

Once all the scores are in from the Board of Directors and they are evaluated and organized by the NERACOOS staff, the Advisory Committee will be convened to discuss the possibilities. It may be a good exercise to look at the mini proposals and main proposals more holistically, mapping out the path from project initiation through to end user and what sort of social or management affects it will have. The IOOS NOFO does provide some guidance on what sort of projects should be included and criteria to be met. NERACOOS staff will make sure to prioritize these criteria to meet the expectations of the NOFO and the needs of the region.

Review of Action Items

- Nominating Committee
 - Rhonda Moniz responded to the call for participation during this meeting and will join Jason Goldstein and Regina Lyons on the committee.
 - NERACOOS staff and the Nominating Committee will consider NOAA participation on the board and who would make a good fit per Nicole Bartlett's suggestion.
 - Consider the possibility of creating a DEI Committee separate from the Nominating Committee.
- Share the NERACOOS communication and branding files with the board.
- NERACOOS staff will follow up with Rhonda regarding the Sea State Podcast and having Jake participate for a guest interview.
- Consider how to align submitted mini proposals with specific user groups and stakeholders.
- NERACOOS Staff will follow up with Andy Pershing and GMRI regarding DEI training.

Next Board Meeting

The Board and Annual Meeting will be held virtually as a single meeting on Thursday November 19, 2020.

Todd Morrison motioned to adjourn the meeting, seconded by Jason Goldstein.